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# PROPOSAL FOR NATIVE FISH RESTORATION IN FOSSIL CREEK

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## Introduction

The Bureau of Reclamation and the Forest Service, Coconino National Forest, are preparing an Environmental Assessment on a proposal to improve and restore a native fishery in upper Fossil Creek, in central Arizona. The proposed action consists of constructing a single concrete fish barrier, renovating the segment of stream between the Fossil Springs diversion and barrier site with the piscicide antimycin-A, and restocking with native fishes that were removed from the stream prior to renovation. The purpose of renovation is to eliminate populations of non-native fishes upstream of the barrier.

Other alternatives that will be evaluated include construction of a fish barrier without stream renovation and fishery management options without a barrier.

To comply with the National Environmental Policy Act of 1969, as amended (NEPA), the Bureau of Reclamation and the Forest Service have determined that an Environmental Assessment needs to be prepared to determine the significance of environmental impacts that could result from implementation of the action.

Reclamation and the Forest Service would like to give the interested public an opportunity to comment on the proposed action. The agencies will then identify significant issues related to the action that should be addressed in the Environmental Assessment.

## Background

Introduction of non-native fishes has been repeatedly documented as one of the most

pervasive and intractable threats to the status of native fish communities in the southwestern United States.

Establishment of nonnative fishes into southwestern aquatic habitats, such as the Gila River basin, has historically resulted in the reduction or elimination of native fishes due to predation, competition, and other factors.

In 2001, the Fish and Wildlife Service issued a revised biological opinion on the transportation and delivery of Central Arizona Project water to the Gila River basin and its potential to introduce and spread non-native aquatic species. The biological opinion addressed the possible serious and adverse effects of the Central Arizona Project on several species of listed native Arizona fishes.

Conservation measures in the opinion direct the Bureau of Reclamation to construct a fish barrier in Fossil Creek (and other specified locations in Arizona) and provide funding for native fish recovery and protection in the Gila River basin. The proposed project would partly satisfy these requirements.

## Time Frame for Action

The time frame for action is being driven by the potential decommissioning of the Childs/Irving Hydroelectric Facility on Fossil Creek. Currently, almost all base flows in the 14-mile reach of Fossil Creek are diverted out of the natural channel by Arizona Public Service Company (APS) to operate the Childs and Irving power plants. Only a small amount of seepage from the diversion dam and releases from the Irving facility support base flows of about 2.2 cubic feet per second in the stream channel. If decommissioning occurs according to the terms of a settlement agreement signed by APS,

American Rivers, The Nature Conservancy, the Yavapai-Apache tribe, and the Center for Biological Diversity, APS will return minimum flows of 43 cubic feet per second to Fossil Creek no later than December 31, 2004.

Once full flows are restored, renovation and any in-stream work would be much more difficult, or impossible to achieve successfully.

### **Fish Barrier Location**

Three sites have been identified in Fossil Creek that are suitable for a fish barrier.

- Upper Site – located 7.3 miles upstream of the confluence of the Verde River immediately north of the Mazatzal Wilderness
- Middle Site (Preferred Site) – located 2.8 miles downstream of the Upper Site in the Mazatzal Wilderness
- Lower Site – located 3.1 miles downstream of the Upper Site in the Mazatzal Wilderness

Under the proposed action, a fish barrier would be constructed at the Middle Site.

### **Purpose of and Need for Action**

The purpose of the proposed action is to restore and allow a native fish assemblage to persist in as much of Fossil Creek as possible. Action regarding the proposed native fish restoration in Fossil Creek is needed because:

- the 2001 biological opinion on the delivery of Central Arizona Project water to the Gila River basin directs the Bureau of Reclamation to construct a fish barrier on Fossil Creek;
- non-native fish are moving up Fossil Creek from the Verde River and adversely affecting native populations;

- native fish populations in Fossil Creek (and the remainder of the Gila River basin) are declining, and non-native fish populations are increasing in numbers and extent; self-sustaining populations of native fish may not persist in the long term if action is not taken;
- Fossil Creek is one of a few perennial streams in Arizona with multiple species of native fish, and actions taken now would prevent continued declines or losses that are possible in the foreseeable future;
- in order to implement Forest Plan direction for maintaining viable populations on native fish, and for recovering federally listed species, action is needed to improve habitat for native fish;
- current low flows in the creek provide conditions where restoration actions are likely to be the most effective.

### **Environmental Assessment**

NEPA applies only to Federal actions; therefore, the first step in determining the scope of the Environmental Assessment is identification of significant issues related to the effect of the proposed Federal action on the existing environment. Public input during this initial scoping process will help us focus the NEPA document on relevant issues.

A no action alternative will be included in the Environmental Assessment. The no action alternative, which describes the conditions that are assumed to exist in the absence of Federal action, provides the basis for comparing the environmental effects of the proposed action and other action alternatives. The Environmental Assessment will focus on the impacts associated with these action alternatives.

We anticipate the subjects that will be addressed in the Environmental Assessment include:

- biological resource effects, including special status species effects;
- historic and prehistoric cultural resource effects;
- hydrology and water quality effects;
- noise effects;
- land use and aesthetic effects;
- effectiveness of alternatives in meeting project goals.

## **Decisions to be Made**

The Bureau of Reclamation and the Forest Service are the lead Federal agencies responsible for preparing the Environmental Assessment. Reclamation would construct the fish barrier on Forest Service land and provide funding for renovation of the stream. Both agencies must render a decision whether to implement the proposed action, other action alternative, or the no action alternative.

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